

Graph of the envelope $S(T)$ versus time T . The curve starts at the origin, rises to a peak, and then decays exponentially. A horizontal double-headed arrow below the curve indicates a time interval of approximately $2 \mu\text{SEC}$.

214 SIMPLIFIED READ CHANNEL BLOCK DIAGRAM

The diagram shows the following components and connections:

- 202 TA CORRECTION HIGH PASS FILTER (TABUF)**: Receives **ANALOG INPUT** and is controlled by **ON/OFF** from block 212.
- 204 READ CHANNEL ANALOG FRONT-END**: Receives output from block 202.
- 206 A/D**: Receives output from block 204.
- 208 READ CHANNEL DIGITAL DETECTOR**: Receives output from block 206.
- 210 TA DETECTOR**: Receives input from block 204 and compares it with a **TA THRESHOLD**.
- 212 TA TIMER/CONTROL**: Receives **ENABLE** from block 210 and outputs **ON/OFF** to block 202.

The diagram shows a variable gain amplifier 202. It features an input differential pair (GM1) with resistors 322 and 320. The output of GM1 is connected to a feedback network consisting of capacitors 312 and 314. The feedback network is connected to an attenuator block 306, which is controlled by a VTUNE input signal. The output of the attenuator is connected to a second differential pair (GM2), which produces the final output signals VOUTP and VOUTM. The gain of the amplifier is controlled by the VTUNE signal, which is applied to the feedback network and the attenuator block.

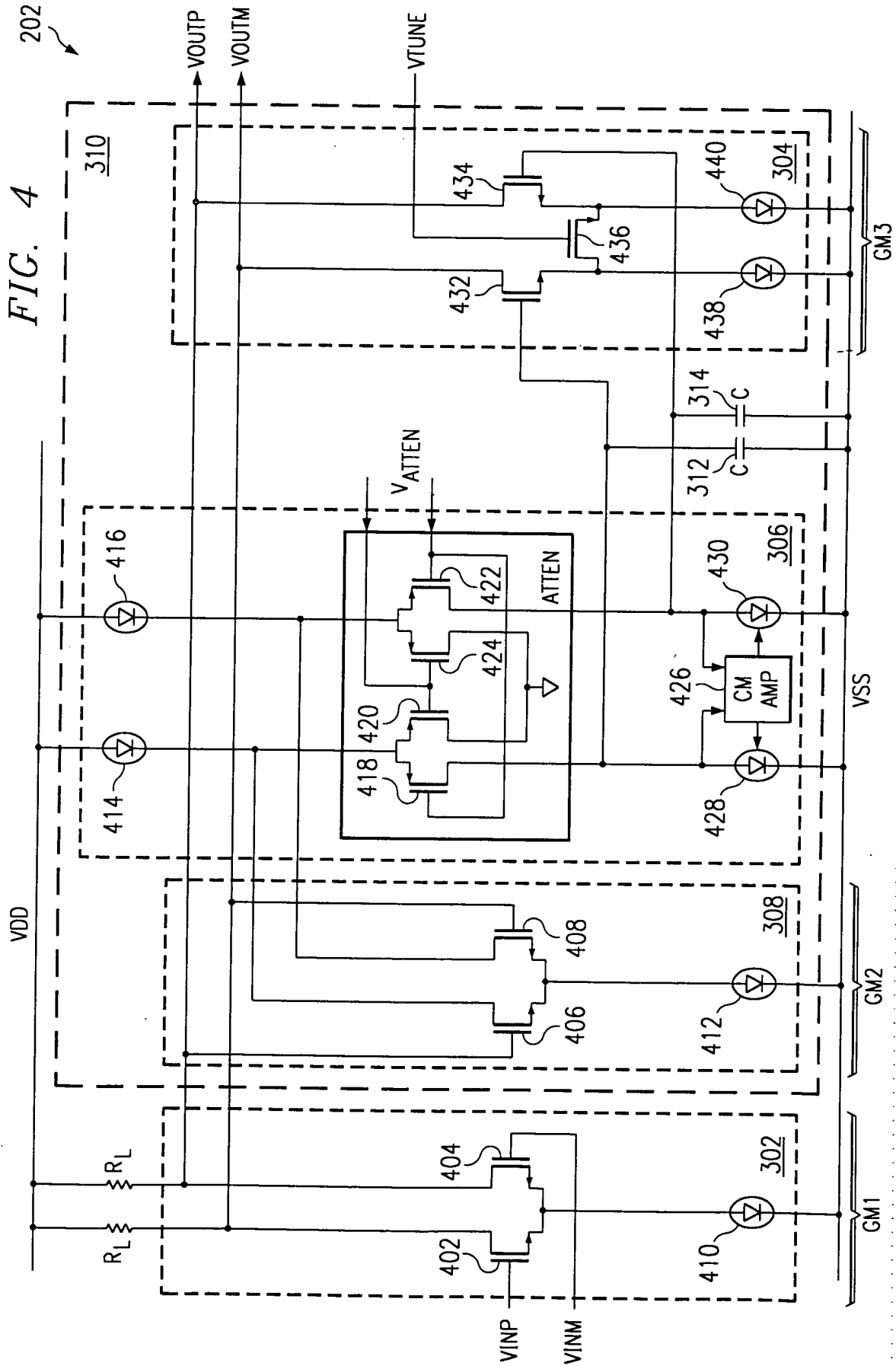


FIG. 5

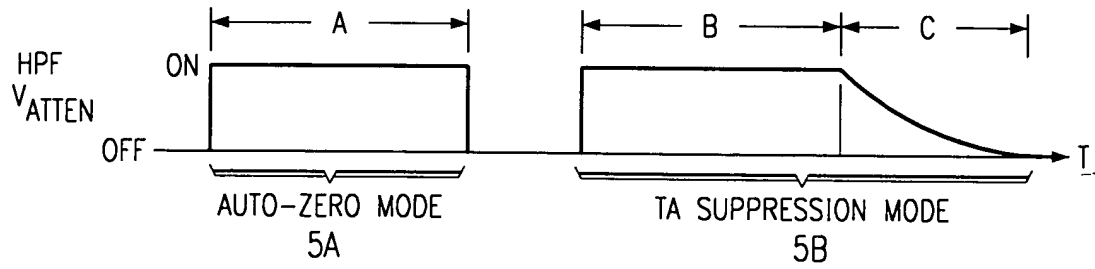
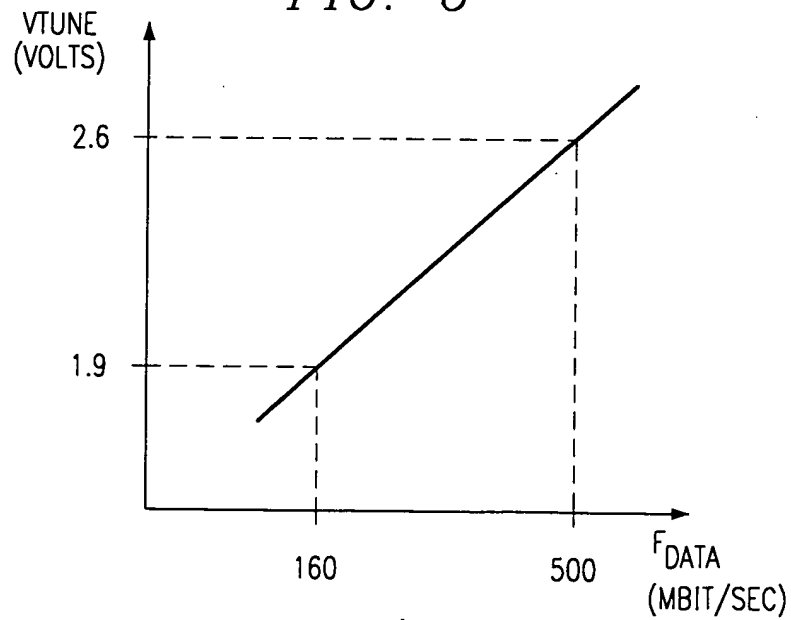


FIG. 6



=> TUNING SIGNAL TRACKS DATA TRANSFER RATE

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FIG. 7

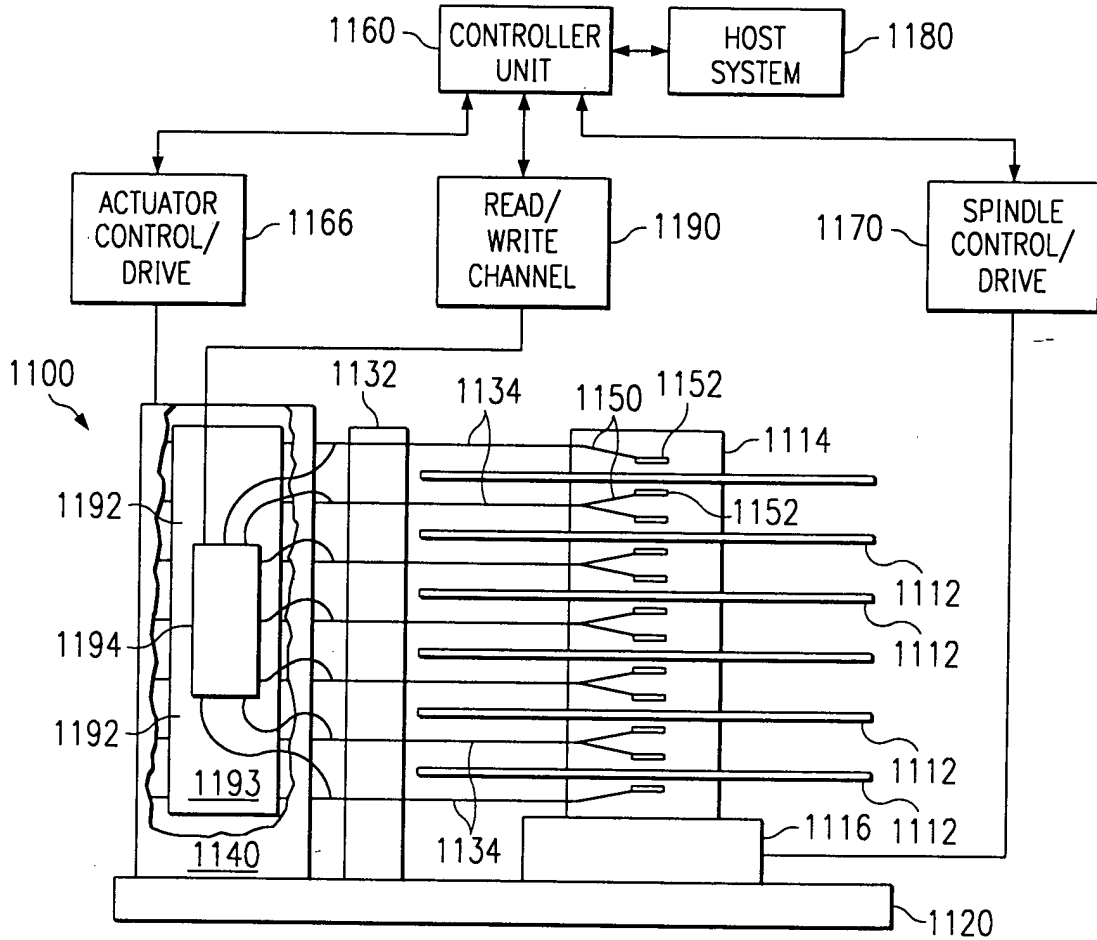


FIG. 8

